

WHAT IS CLAIMED IS:

1. A measuring instrument, comprising: an arm provided with a detector at a distal end thereof; and a support for supporting the arm in a manner movable in the axial direction thereof, the measuring instrument measuring a dimension of a workpiece based on the position of the detector,

wherein the arm includes a plurality of short arms sequentially disposed on the support, the short arm being respectively supported in a manner movable relative to a former component thereof, and

wherein the measuring instrument has drivers for independently moving a proximal short arm and the other short arm in the axial direction of the proximal short arm.

2. The measuring instrument according to claim 1,

wherein the drivers are synchronous drivers that are synchronously driven, and the proximal short arm and the other short arm are driven in an interlocking manner.

3. The measuring instrument according to claim 2,

wherein the short arm includes a first short arm supported by the support and a second short arm provided next to the first short arm and having the detector at a distal end thereof, and

wherein the synchronous driver has a first moving mechanism for moving the first short arm in the axial direction and a second moving mechanism for moving the second short arm in the same direction as the moving direction of the first short arm in synchronization with the first moving mechanism.

4. The measuring instrument according to claim 3,

wherein the first moving mechanism has a rack provided on the support along the moving direction of the first short arm, a pinion rotatably provided on the first short arm and meshing with the rack, and a rotation-applying device for rotating a shaft of the pinion, and

wherein the second moving mechanism has a first pulley fixed to the shaft of the

pinion, a second pulley rotatably supported on the distal end of the first short arm, and a belt wound around the pulleys with a part thereof being jointed with the second short arm.

5. The measuring instrument according to claim 3,
5 wherein the support and the first short arm are tubular cylinders, and
 wherein the first short arm is accommodated in the support and the second short
arm is accommodated in the first short arm.
6. The measuring instrument according to claim 5,
10 further comprising air bearings provided between the support and the first short
arm and between the first short arm and the second short arm.
7. The measuring instrument according to claim 3,
 further comprising a cover that covers the second short arm from the distal end of
15 the first short arm to the distal end of the second short arm, the cover being stretched and
contracted in the moving direction of the second short arm in accordance with the
movement of the second short arm.